
पशु आहार घटक के रूप में चना चुन्नी —
विशिष्टि
(पहला पुनरीक्षण)

**Gram Chuni as Livestock Feed
Ingredient — Specification**
(*First Revision*)

ICS No. 65.120

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Animal Husbandry, Feeds and Equipment Sectional Committee had been approved by the Food and Agriculture Division Council.

Gram Chuni is a common livestock feed ingredient in India. The formulation of this standard was undertaken by the Animal Husbandry, Feeds and Equipment Sectional Committee in accordance with its programme planned for the formulation of Indian Standards for the various livestock feeds used in this country.

This standard was published in 1965. In this revision, the standard has been updated considering latest technological developments and manufacturing practices. Following major changes have been made in this revision:

- a) Requirement for aflatoxin B1 has been introduced in the standard.
- b) Requirements of Castor husk and *Mahua* oilcake have been introduced in the standard.
- c) Methods of tests prescribed for determination of crude protein, crude fat, crude fibre and acid insoluble ash have been updated.

The composition of the Committee responsible for formulation of the standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

GRAM CHUNI AS LIVESTOCK FEED INGREDIENT — SPECIFICATION

(*First Revision*)

1 SCOPE

1.1 The standard prescribes the requirements and the methods of sampling and test for gram (*Cicer arietinum* L.) *Chuni* for used as livestock feed ingredient.

2. REFERENCES

The following standards contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
1070 : 1992	Reagent grade water (<i>third revision</i>)
1712 : 2022	Cottonseed oilcake as livestock feed ingredient — Specification (<i>third revision</i>)
2052 : 2009	Compounded feeds for cattle — Specification (<i>fourth revision</i>)
7874 (Part 1) : 1975	Methods of tests for animal feeds and feeding stuffs: Part 1 General methods
IS/ISO 5983 (Part 1) : 2005	Animal feeding stuffs — Determination of nitrogen content and calculation of crude protein content: Part 1 Kjeldahl method
5983 (Part 2) : 2021/ ISO 5983-2 : 2009	Animal feeding stuffs — Determination of nitrogen content and calculation of crude protein content: Part 2 Block digestion

and steam distillation method (*first revision*)

IS/ISO 6492 : 1999 Animal feeding stuffs — Determination of fat content

IS/ISO 6865 : 2000 Animal feeding stuffs — Determination of crude fibre content — Method with intermediate filtration

14826 : 2021/ISO 5985 : 2002 Animal feeding stuffs — Determination of ash insoluble in hydrochloric acid (*first revision*)

IS/ISO 14718 : 1998 Animal feeding stuffs — Determination of aflatoxin B₁ content of mixed feeding stuffs — Method using high-performance liquid chromatography

ISO 17375 : 2006 Animal feeding stuffs — Determination of aflatoxin B₁

3 DESCRIPTION

Gram *Chuni* shall be the material obtained as a byproduct in the preparation of gram *Dal* for human consumption and consists of finer broken pieces of *Dal* including germ and a portion of the husk.

4 REQUIREMENTS

4.1 General

The material shall be free from adulterants, musty, stale, or other objectionable odour or sourness, and from lumps, dirt, and extraneous matter, including iron or other metallic pieces. The material shall be free from fungus or insect infestation.

4.2 The material shall also conform to the requirements prescribed in Table 1.

Table 1 Requirements for Gram *Chuni* as Livestock Feed Ingredient
(Clause 4.2)

Sl No.	Characteristic	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Moisture, percent by mass, <i>Max</i>	10.0	4 of IS 7874 (Part 1)
ii)	Crude Protein ($N \times 6.25$), percent by mass, <i>Min</i>	18.0	IS/ISO 5983 (Part 1)* or IS 5983 (Part 2)
iii)	Crude fat, percent by mass, <i>Min</i>	2.5	IS/ISO 6492
iv)	Crude fibre, percent by mass, <i>Max</i>	12.0	IS/ISO 6865
v)	Total ash, percent by mass, <i>Max</i>	4.5	9 of IS 7874 (Part 1)
vi)	Acid insoluble ash, percent by mass, <i>Max</i>	1.0	Annex A of IS 1712 or IS 14826*
vii)	Castor husk, oil cake	Absent	11 of IS 7874 (Part 1)
viii)	<i>Mahua</i> cake	Absent	12 of IS 7874 (Part 1)
ix)	Aflatoxin B ₁ , ppb, <i>Max</i>	20.0	IS/ISO 14718* or ISO 17375 or AOAC 2003.02

NOTES

1 The values specified for requirements at Sl No. ii) to ix) are on moisture-free basis.

2 In case of dispute, the test methods given above and wherever indicated by '*' shall be the referee method.

3 For crude fibre, the manual method given in IS/ISO 6865 shall be the referee method.

- d) Net mass in kg;
- e) Date of packing;
- f) Best before date in month and year format; and
- g) Any other requirements as specified under the *Legal Metrology (Packaged Commodities) Rules*, 2011.

5 PACKING AND MARKING**5.1 Packing**

Unless otherwise agreed to between the purchaser and the vendor, the material shall be packed in sound jute or HDPE bags. The mouth of each bag shall be either machine-stitched or rolled over and hand-stitched with strong jute twine.

5.2. Marking

5.2.1 Each bag shall be legibly and indelibly marked with the following information:

- a) Name of the material;
- b) Name and address of the manufacturer;
- c) Batch or code number;

5.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

6 SAMPLING

Representative samples of the material for ascertaining conformity to this standard shall be drawn according to the method prescribed in Annex H of IS 2052.

7 TESTS

7.1 Tests shall be carried out as prescribed in col 4 of Table 1.

7.2 Quality of Reagents

Unless specified otherwise, pure chemicals and distilled water (*see* IS 1070) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the test results.

ANNEX A
(Foreword)

COMMITTEE COMPOSITION

Animal Husbandry, Feeds and Equipment Sectional Committee, FAD 05

<i>Organization</i>	<i>Representative(s)</i>
In Personal Capacity (Former Director, Indian Veterinary Research Institute, Izzatnagar)	DR R. K. SINGH (Chairman)
All India Poultry Breeders Association, New Delhi	DR. A.K. RAJPUT
Animal Welfare Board of India, Faridabad	DR PRACHI JAIN DR DEBALINA MITRA (<i>Alternate</i>)
Association of Indian Pet Food Manufacturers, New Delhi	DR AKANKSHA SINGH SHRI MANISH SINGH (<i>Alternate</i>)
Centre for Science and Environment, New Delhi	SHRI AMIT KHURANA
Centre of Analysis and Learning in Livestock and Food, Anand	DR RAJESH NAIR DR RAJEEV CHAWLA (<i>Alternate</i>)
Chhattisgarh Kamdhenu Vishwavidyalaya, Raipur	DR SANJAY SHAKYA DR MANOJ KUMAR GENDLEY (<i>Alternate</i>)
Compound Livestock Feed Manufacturers Association of India, Navi Mumbai	MS CHANDRIKA VENKATESH SHRI SURESH DEORA (<i>Alternate</i>)
CSIR - Central Drug Research Institute, Lucknow	DR D. S. UPADHYAY DR DHANANJAY HANSDA (<i>Alternate</i>)
Department of Animal Husbandry and Dairying, Panchkula	DR BIRENDER SINGH LAURA DR RAJIV BANGER (<i>Alternate</i>)
Federation of Indian Animal Protection Organizations, New Delhi	MS SIRJANA NIJJAR MS VARNIKA SINGH (<i>Alternate</i>)
Food Safety and Standards Authority of India, New Delhi	DR K. ABIRAMI MS MANPREET KOUR (<i>Alternate</i>)
Guru Angad Dev Veterinary and Animal Sciences, University, Ludhiana	DR J. S. LAMBA DR JASMINE KAUR (<i>Alternate</i>)
ICAR-Central Avian Research Centre, Bareilly	DIRECTOR CARI DR S. K. BHANJA (<i>Alternate</i>)
ICAR-Central Institute for Research on Buffaloes, Hisar	DR P. C. LAILER DR AVIJIT DEY (<i>Alternate</i>)

<i>Organization</i>	<i>Representative(s)</i>
ICAR-Central Sheep and Wool Research Institute, Avikanagar	DR RANDHIR SINGH BHATT DR SROBANA SARKAR (<i>Alternate</i>)
ICAR - Directorate of Poultry Research, Hyderabad	DR R. N. CHATTERJEE DR S. V. RAMA RAO (<i>Alternate I</i>) DR M.V.L.N. RAJU (<i>Alternate II</i>)
ICAR - Indian Veterinary Research Institute, Izzatnagar	DR A. K. VERMA
ICAR-National Research Centre on Equines, Hisar	DR S. C. MEHTA DR R. A. LEGHA (<i>Alternate</i>)
ICAR-National Research Centre on Pig, Guwahati	DR KESHAB BARMAN DR SANTANU BANIK (<i>Alternate</i>)
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Indian Federation of Animal Health Companies, Mumbai	DR P. G. PHALKE DR TANWEER ALAM (<i>Alternate</i>)
Ministry of Fisheries, Animal Husbandry and Dairying, Department of Animal Husbandry and Dairying, New Delhi	DR H. R. KHANNA DR SUJIT NAYAK (<i>Alternate I</i>) DR ANIBENCOI JACOB (<i>Alternate II</i>)
National Dairy Development Board, Anand	DR V. SRIDHAR DR PANKAJ SHERASIA (<i>Alternate</i>)
National Dairy Research Institute, Karnal	DR NITIN TYAGI DR SACHIN KUMAR (<i>Alternate</i>)
National Egg Coordination Committee, New Delhi	SHRI AJIT SINGH SHRI BHAGWATI SINGH (<i>Alternate</i>)
National Institute of Animal Nutrition and Physiology, Bengaluru	DR RAGHAVENDRA BHATTA DR D. T. PAL (<i>Alternate</i>)
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Tamil Nadu Veterinary and Animal Sciences University, Chennai	DR A. NATRAJAN DR R. RAJENDRAN (<i>Alternate</i>)
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Amendments Issued Since Publication

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